

REMARKS

Claims 1-19 are pending. Claims 7-9 and 12-17 have been withdrawn from consideration by the Examiner for being drawn to a non-elected invention. By this Amendment, Claims 3-4 are canceled without prejudice or disclaimer, Claims 1-2 and 10-11 amended, and Claims 18-19 added. Applicants respectfully submit no new material is presented herein.

Claim Rejections – 35 U.S.C. §112

Claims 1-6 and 10-11 are rejected under 35 U.S.C. §112, second paragraph. The claims have been amended responsive to the rejection. As such, Applicants respectfully request withdrawal of the rejection.

Claim Rejections – 35 U.S.C. §102

Claims 1-6 are rejected under 35 USC §102(b) as being anticipated by U.S. Patent No. 5,691,876 to Chen et al. ("Chen"). Applicants respectfully traverse the rejection.

Claim 1 recites an electrostatic chucking device having a laminated structure formed by sequentially laminating a first insulation layer, an electrode layer and a second insulation layer on an aluminum alloy metal substrate, wherein the first insulation layer and the second insulation layer are constituted of polyimide films, and at least an adhesion between the aluminum alloy metal substrate and the first insulation layer is performed by using a thermoplastic polyimide-based adhesive film having a film thickness of 5 to 50 μm and by subjecting the thermoplastic polyimide-based adhesive film to a low-temperature compression bonding processing under pressure at a temperature of 100 to 250°C.

As noted above, the invention recited by Claim 1 relates to an electrostatic chucking device that is obtained by using a thermoplastic polyimide-based adhesive film and subjecting the thermoplastic polyimide-based adhesive film to a compression bonding process at a relatively low heating temperature in the range of 100 to 250°C. As explained in paragraph [0022] of the originally filed application, the electrostatic chucking device obtained by performing the compression bonding process at the recited low temperature eliminates or avoids damage to the aluminum substrate. That is, the electrostatic chucking device recited by Claim 1 has excellent insulation properties in which the formation of cracks in the alumite film of the aluminum substrate is suppressed, thereby eliminating problems during practical use, such as the reduction in insulation resistance of the aluminum substrate.

Chen discloses a high temperature polyimide electrostatic chuck assembly (100) having a laminated structure (See Figure 1). A first, self-adhering dielectric layer (124) is laminated onto a workpiece support platen (110). A conductive layer (122) overlays the first layer (124) and a second, self-adhering dielectric layer (114) is disposed on the conductive layer (122). At least one of the first and second adhering layers can be manufactured from a polyimide (See column 2, lines 18-26). Chen describes Kapton KJ as a specific example of the polyimide film. Applicants note Kapton KJ must be subjected to a compression bonding process at a temperature of **280°C or higher** (see column 6, line 54 to column 7, line 16) when it is adhered to a metal substrate. The polyimide film is adhered to the metal substrate by performing a compression bonding process at a temperature of **350°C** in Example 1. As a result, the metal substrate upon which the polyimide film is adhered is damaged by the heat, and in the case where *if*

the metal substrate taught by Chen were an aluminum substrate, the insulation resistance is reduced due to cracks in the alumite.

In other words, Claim 1 recites an electrostatic chucking device that has excellent insulation properties in which damages are prevented from forming on the aluminum substrate. In contrast, Chen does not consider the possibility of eliminating or suppressing the formation of damages on the substrate by performing a low-temperature compression bonding process to form the electrostatic device.

Furthermore, Applicants respectfully note the Office Action asserts Chen discloses the substrate (11) is made of aluminum alloy and refers to column 5, lines 31-32 of Chen to support the position. However, Applicants have carefully reviewed Chen and it appears as if the Office Action is mistaken in the understanding as to the features being taught by Chen. In particular, Applicants note the passage of Chen cited by the Office Action to support the assertion that Chen teaches a substrate made of aluminum alloy actually states that thin films of various metals, such as aluminum, aluminum alloys, refractory metal silicides, etc, can be deposited onto an item (e.g., a substrate). In other words, Chen actually teaches metal films can be deposited onto a substrate. Moreover, Applicants note Chen discloses the thermoplastic polyimide-based film has a thickness of 2.4 to 12 μ m.

To qualify as prior art, a single reference must teach, i.e., identically disclose, each and every feature recited by a rejected claim. As explained above, Chen does not disclose or suggest each feature recited by Claim 1. Therefore, Chen does not anticipate, nor render obvious, the invention recited by Claim 1. Accordingly, Applicants respectfully submit Claim 1 should be deemed allowable over Chen.

Claims 2, 5-6 and 18-19 depend, directly or indirectly, from Claim 1. It is respectfully submitted that these five (5) dependent claims be deemed allowable for at least the same reasons Claim 1 is allowable, as well as for the additional features recited therein.

Applicants respectfully request withdrawal of the rejection.

Claim Rejection – 35 U.S.C. §103

Claims 10-11 are rejected under 35 U.S.C. §103(a) as being unpatentable over Chen, as applied to Claims 1-2 above. Applicants respectfully traverse the rejection.

Chen is described above. As noted above, Chen does not teach or suggest each and every feature recited by Claim 1.

Claims 10-11 depend from Claim 1 and therefore include all of the features recited by Claim 1. Therefore, Applicants respectfully submit Claims 10-11 should be deemed allowable for at least the same reasons Claim 1 is allowable, as well as for the additional subject matter recited therein.

Accordingly, Applicants respectfully request withdrawal of the rejection.

Conclusion

In view of the foregoing, reconsideration of the application, withdrawal of the outstanding rejections, allowance of Claims 1-2, 5-6, 10-11 and 18-19, and the prompt issuance of a Notice of Allowability are respectfully solicited.

Should the Examiner believe anything further is desirable in order to place this application in better condition for allowance, the Examiner is requested to contact the undersigned at the telephone number listed below.

In the event that the filing of this paper is not deemed timely, Applicants petition for an appropriate extension of time. Any petition fee for the extension of time and any other fees that may be required in relation to this paper can be charged to Deposit Account No. 01-2300, **referencing Docket No. 101160-00026.**

Respectfully submitted,



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Enclosures: Petition for Extension of Time (3 months)
Amendment and Fee Transmittal

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